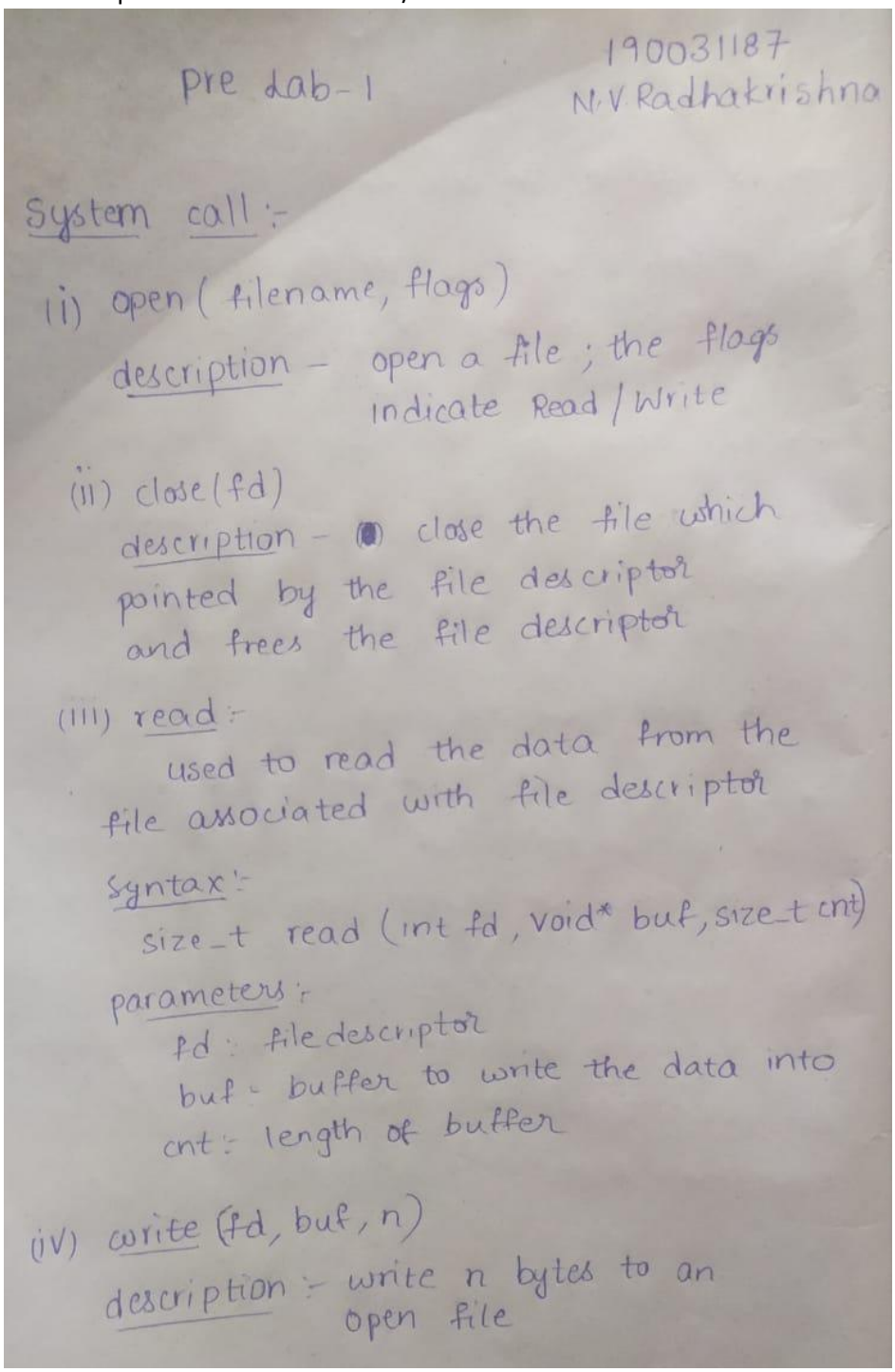
PRELAB-1

Write the description for the following system calls: open, close, read, write, fork, wait, exit, sleep, File descriptor values for standard I/O channels.



Pre Lab-1

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System call :-

(i) open (filename, flags)

description - open a file ; the flags indicate Read / Write

(ii) close(fd)

description - close the file which pointed by the file descriptor and frees the file descriptor

(iii) read :-

used to read the data from the file associated with file descriptor

Syntax :-

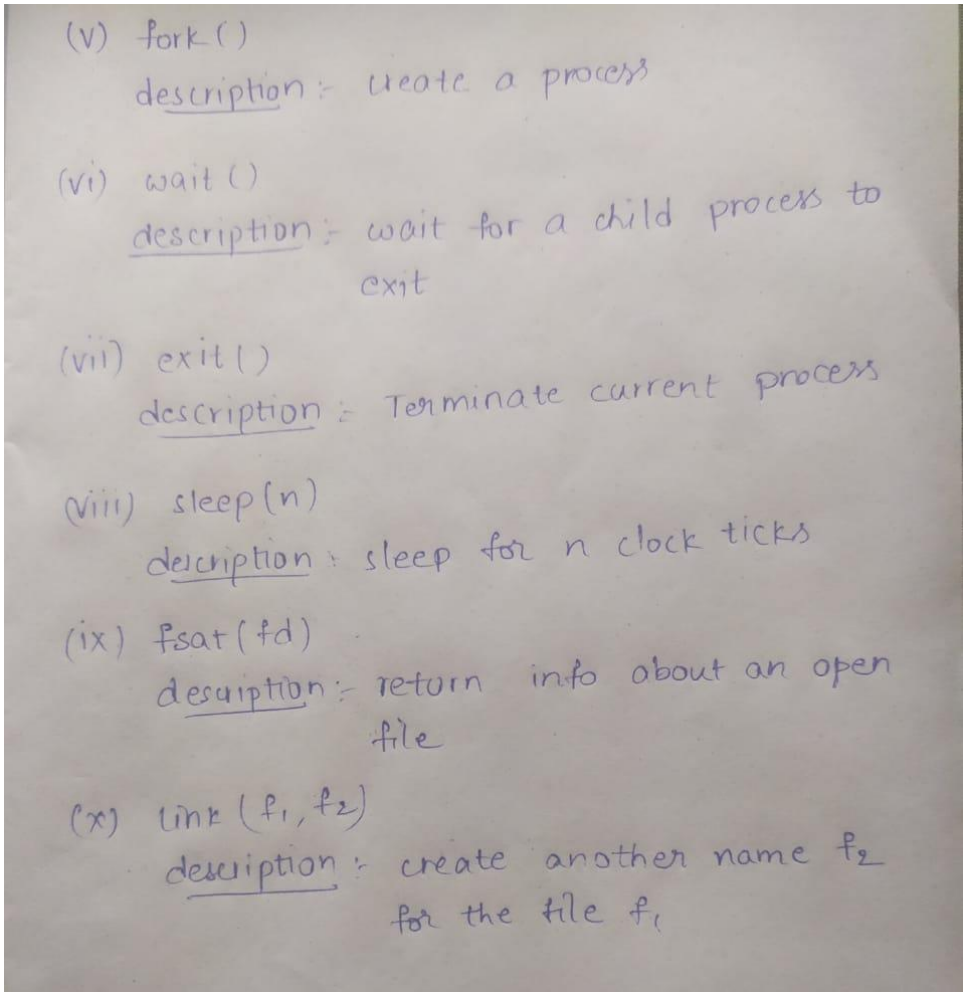
size_t read (int fd, void* buf, size_t cnt)

parameters :-

fd : file descriptor
buf - buffer to write the data into
cnt : length of buffer

(iv) write (fd, buf, n)

description :- write n bytes to an open file



(v) fork()
description :- create a process

(vi) wait()
description :- wait for a child process to exit

(vii) exit()
description :- Terminate current process

(viii) sleep(n)
description :- sleep for n clock ticks

(ix) fsat(fd)
desciption :- return info about an open file

(x) link(f_1, f_2)
description :- create another name f_2 for the file f_1

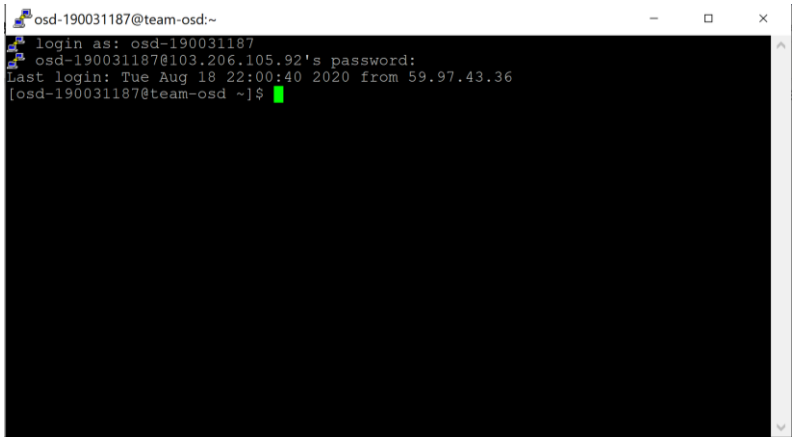
INLAB-1

Write a system program for implementing cat.c: which forms the essence of cat copies data from its standard input to its standard output. If an error occurs, it writes a message to the standard error. fork.c: A Simple Child Creation Program.

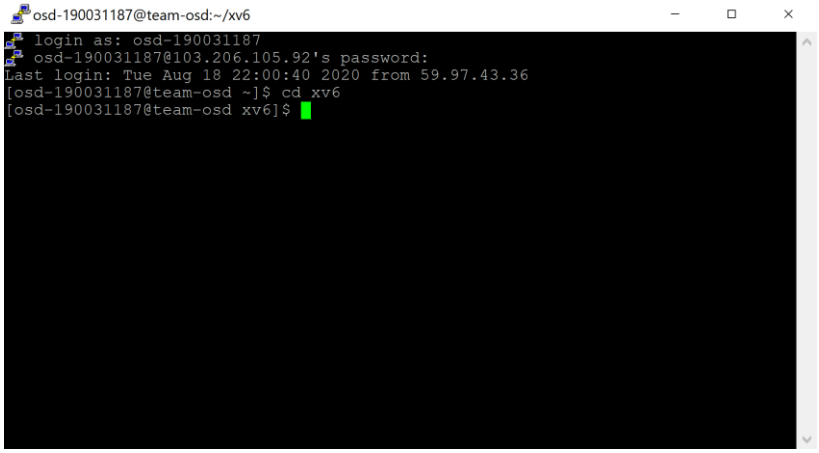
Solution)

Stepwise Procedure:

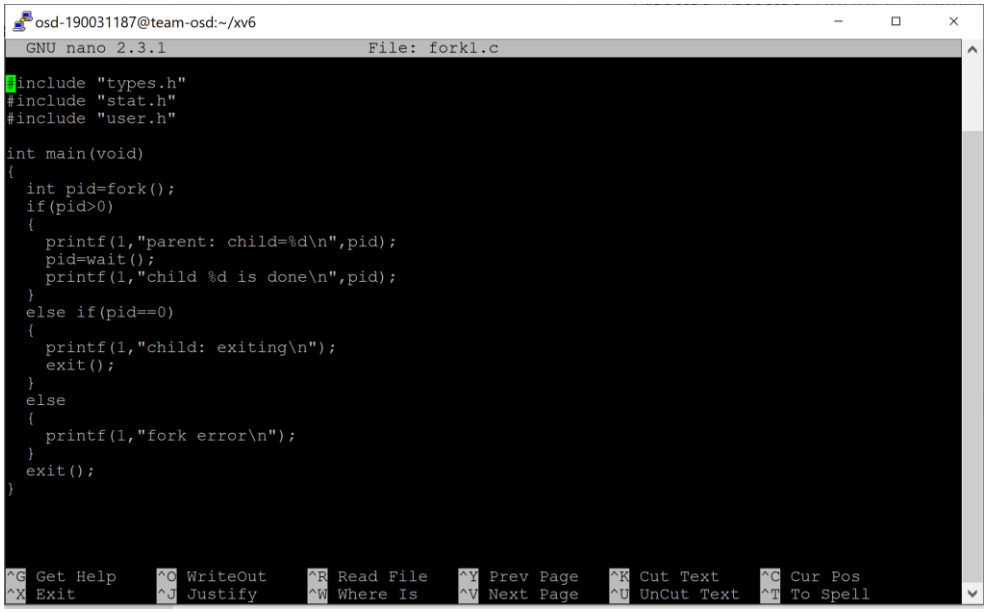
1) Login to putty and write cd xv6



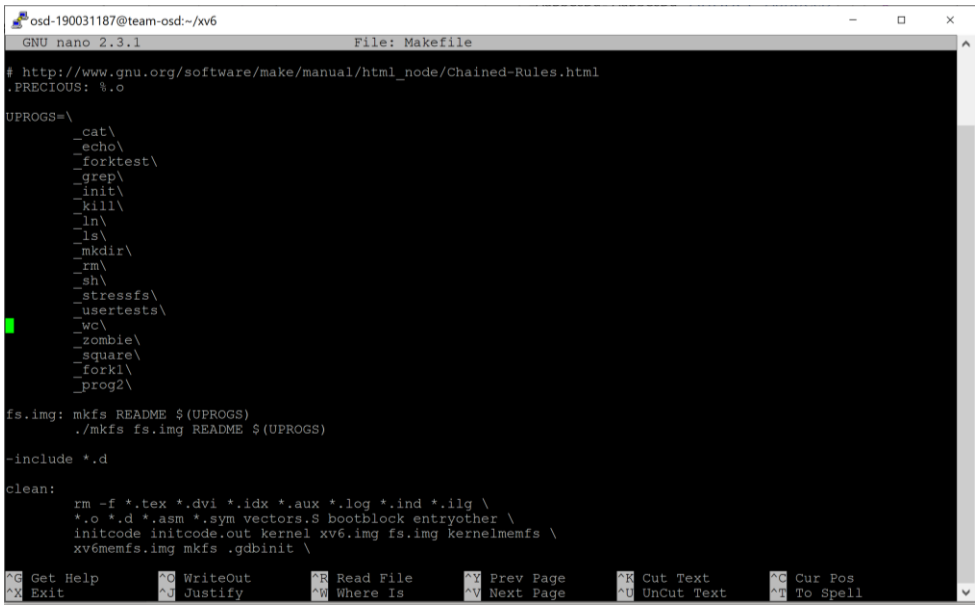
2) next type cd xv6



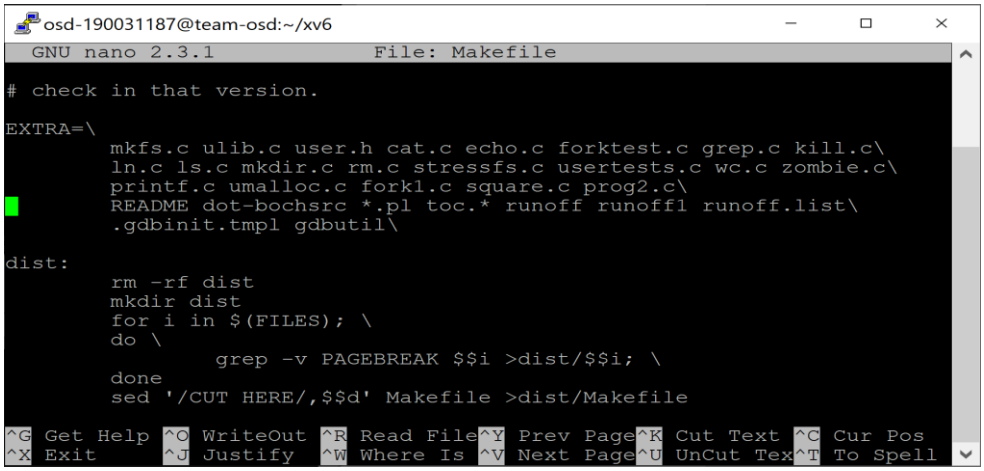
3) Type nano fork1.c and enter the code and save



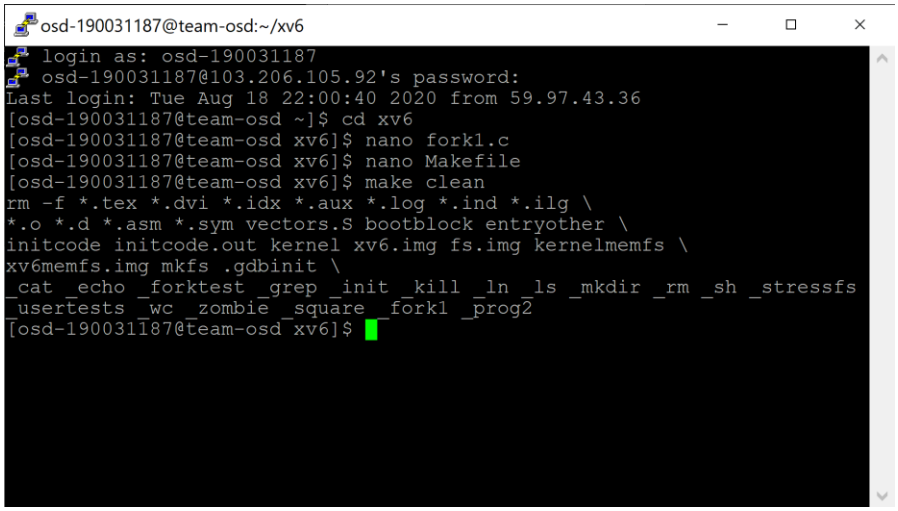
4) next type nano Makefile Under UPROGS add the file



4.2) Also Under EXTRA add the file and SAVE

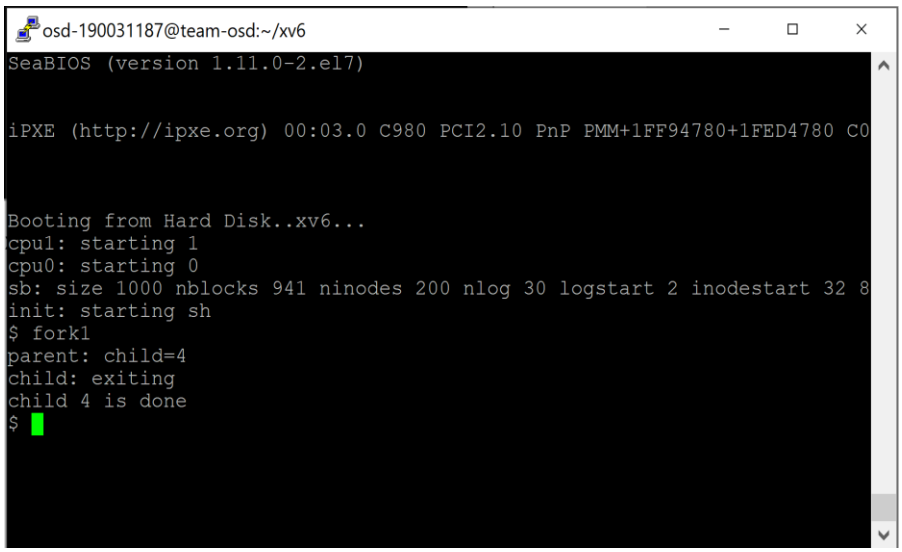


5) write make clean



7) next write make command and next write make qemu-nox

9) type your file name the ouput will execute



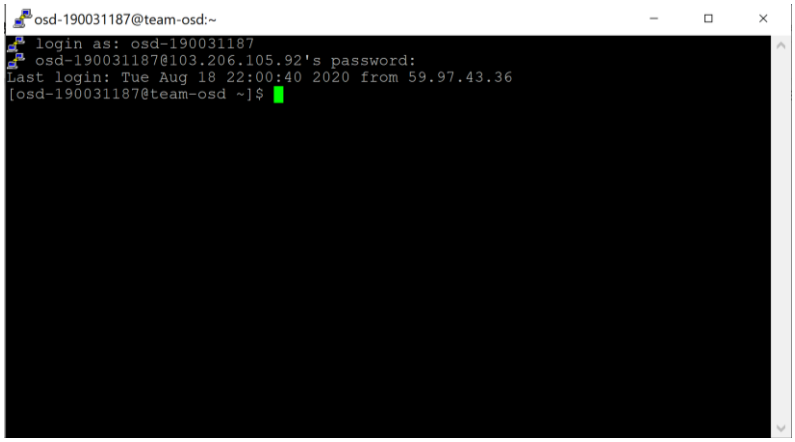
POSTLAB-1

Write a program using C library functions for file handling Standard I/O library that will copy data from one file to another file. io.c : A Program That Does I/O operations.

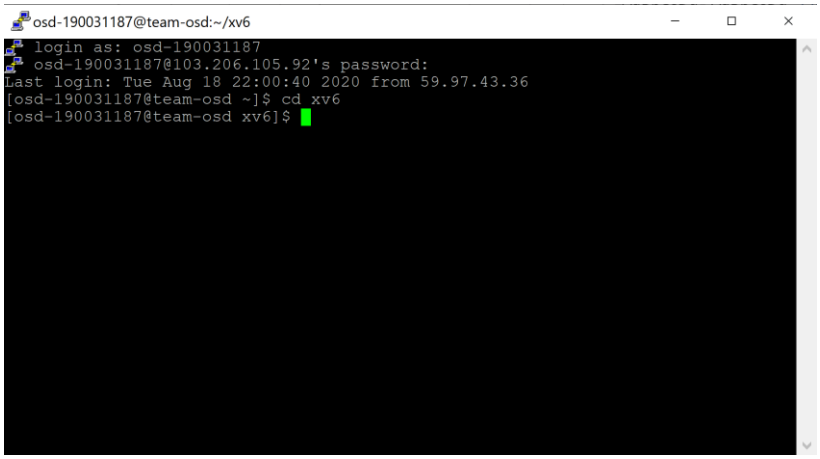
Solution)

Stepwise Procedure:

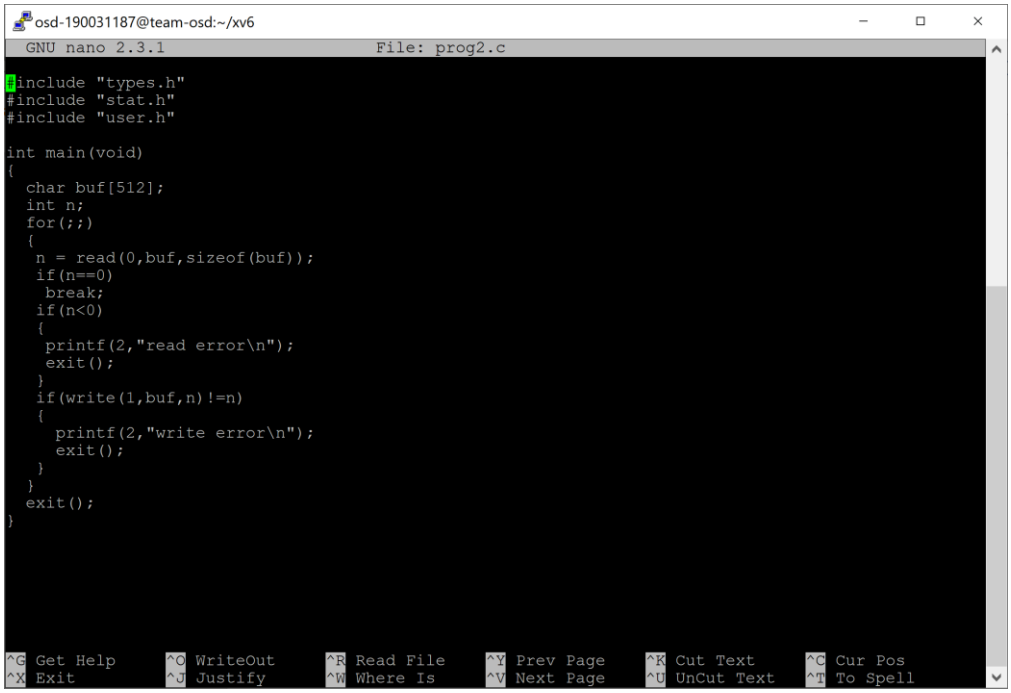
1) Login to putty and write cd xv6



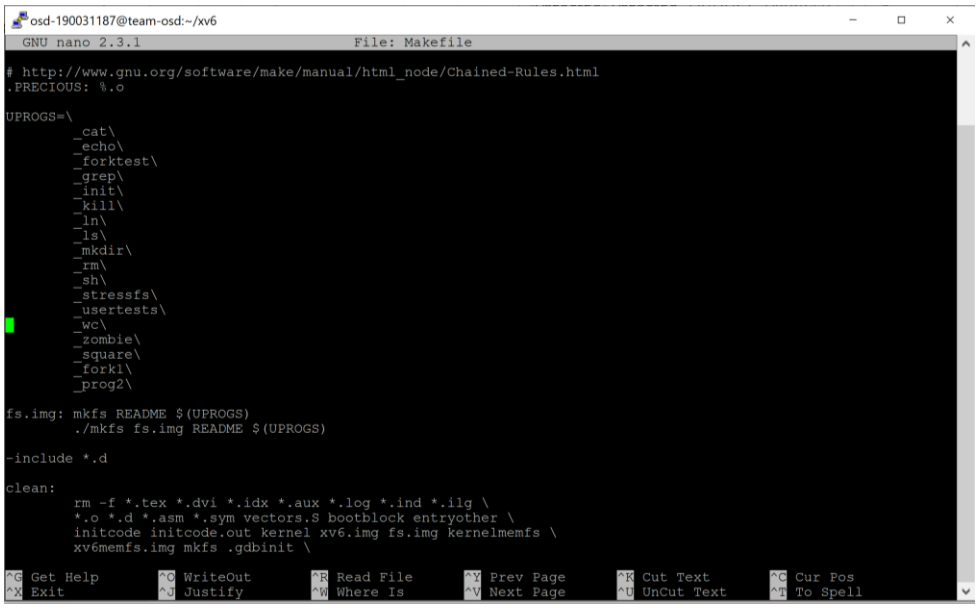
2) next type cd xv6



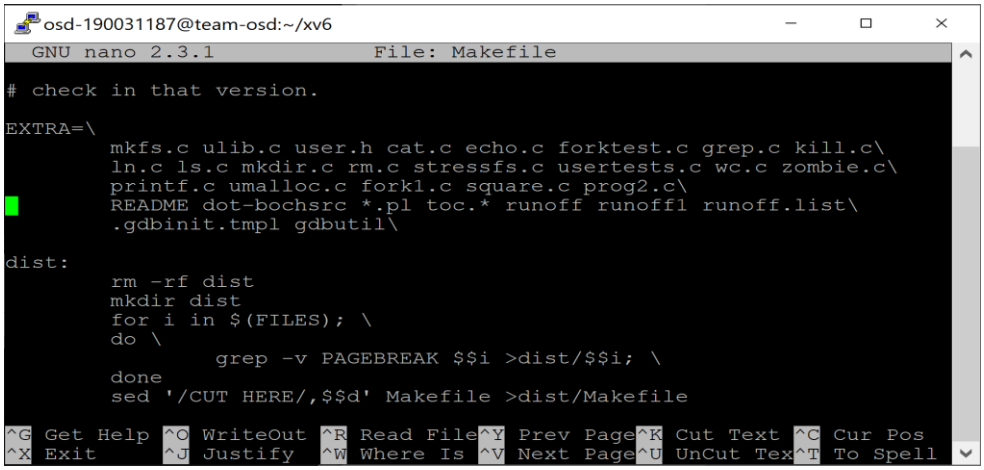
3) Write code for i/o



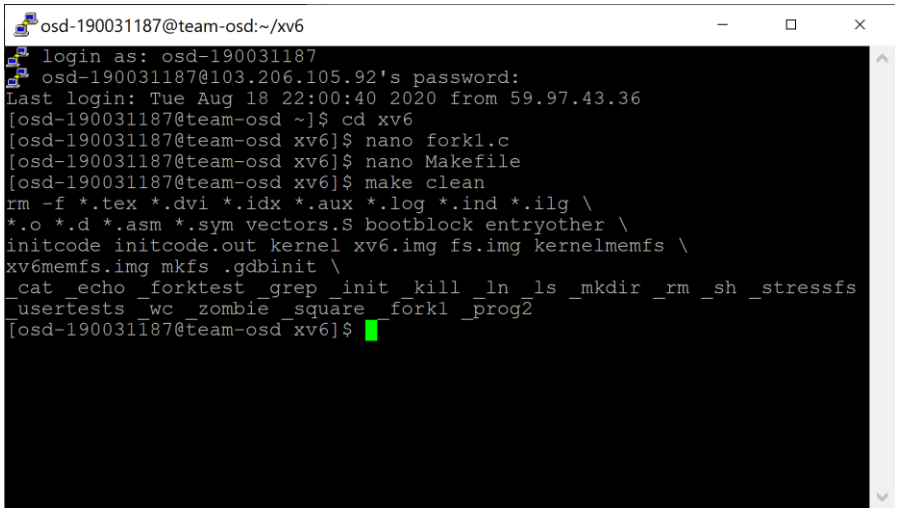
4) next type nano Makefile Under UPROGS add the file



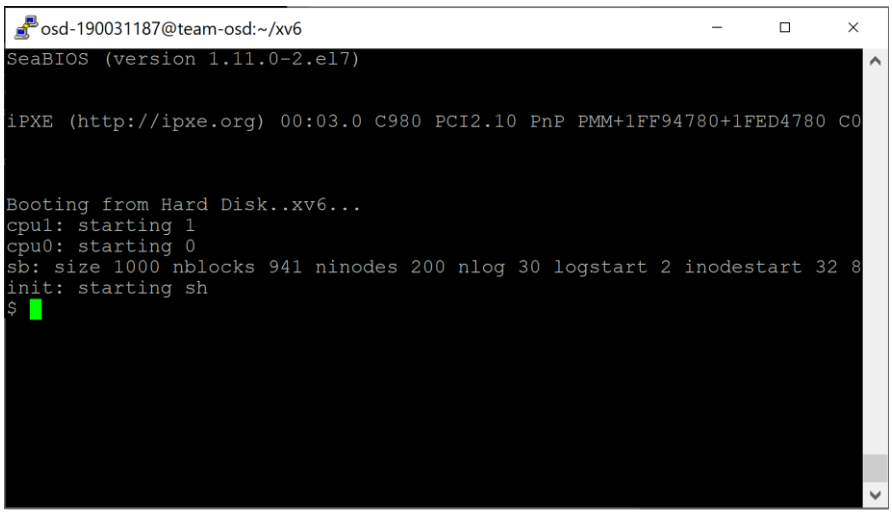
4.2) Also Under EXTRA add the file and SAVE



5) write make clean



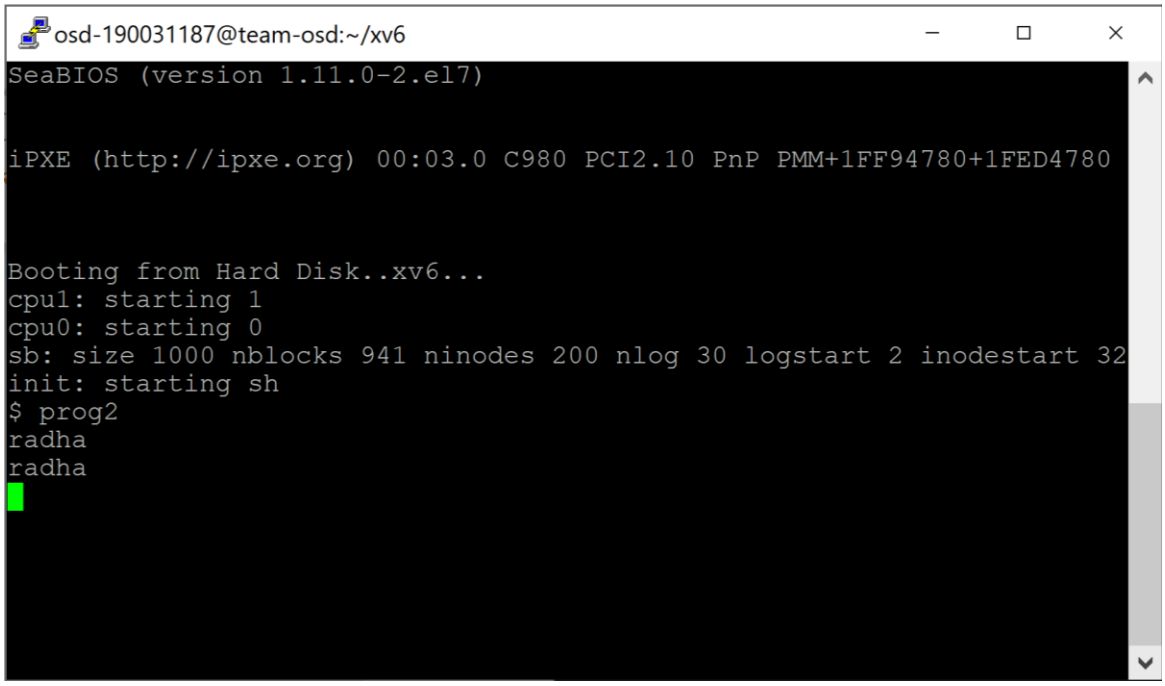
7) next write make command and next write make qemu-nox



9) type your file name

input:radha

output:radha


osd-190031187@team-osd:~/xv6
SeaBIOS (version 1.11.0-2.el7)
iPXE (http://ipxe.org) 00:03.0 C980 PCI2.10 PnP PMM+1FF94780+1FED4780
Booting from Hard Disk..xv6...
cpu1: starting 1
cpu0: starting 0
sb: size 1000 nblocks 941 ninodes 200 nlog 30 logstart 2 inodestart 32
init: starting sh
$ prog2
radha
radha